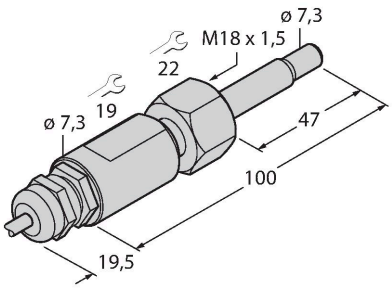
FCST-A4-NA/D100 10M
Flow Monitoring – Functionality Corresponding to Flow Module
Remote Probe



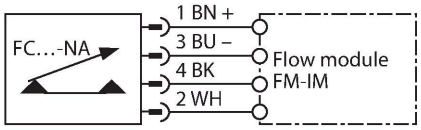
Technical data

ID	100002579
Type	FCST-A4-NA/D100 10M
Special version	D100 Corresponds to:temperature range 10…120 °C
Mounting conditions	Immersion sensor
Water Operating Range	1…150 cm/s
Oil Operating Range	3…300 cm/s
Stand-by time	typ. 8 s (2…15 s)
Switch-on time	typ. 2 s (1…13 s)
Temperature gradient	≤ 250 K/min
Medium temperature	10…+120 °C
Electrical data	
Protection class	IP68
Mechanical data	
Design	Immersion
Housing material	Stainless steel, 1.4571 (AISI 316Ti)
Sensor material	Stainless steel, 1.4571 (AISI 316Ti)
Seal	FPM
Electrical connection	Cable
Cable length	10 m
Cable Jacket Material	FEP
Core cross-section	4 x 0.25 mm^2
Pressure resistance	100 bar
Process connection	M18 × 1.5 female thread

Features

- Thermodynamic operating principle
- Functionality in accordance with flow module
- Extended temperature range
- Media temperature +10…+120 °C
- Freely rotatable sensor
- Plugged in with adapter
- Screw-in adapter, M18 x 1.5

Wiring diagram



Functional principle

The FCST flow sensors operate on the thermodynamic principle.

Thanks to the modular plug-in concept, they can be aligned freely within the flow channel, independent from the process connection. The modular concept makes installation and precise alignment of the sensor easy which is very important for flow monitoring.

The adapters are available in all standard industrial thread sizes. The sensor-adapter system can thus be adjusted easily to any application requirements. The modular concept makes the system also very resistant to high pressures.

The remote probes are connected to the IO-link capable FM flow modules. With this, you can continuously monitor the flow velocity, medium temperature and collect diagnoses. Straightforward to use functionalities such as Quick-Teach, diagnostics, IO-Link transfer of process values and device parameters.

LEDs as well as a 10-segment LED band at the front indicate the local operating status.

LED display

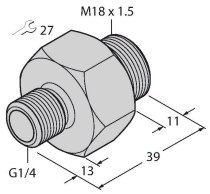
LED	Color	Status	Description
	Depending on the flow module used		

Mounting instructions

Mounting Adapter	The freely rotatable flow sensors are mounted with the FCA-FCST adapter. The adapter is screwed in a T piece or a welding sleeve and sealed accordingly. When assembling adapters with cylindrical thread, use the enclosed seal (e.g. G1/4, G1/2, G3/4, etc.). Mounting adapters with NPT-thread are generally delivered without seal (e.g. N1/2). Use hemp or teflon tape The sensor is fixed in the adapter by means of a captive nut fitted between the upper housing part and the cone seat.
Mounting position	In order to minimize potential misinterpretations due to disturbance, it is recommended to position the sensor with a minimum separation distance of 3 x di before and 5 x di after bends, changes in cross section, valves, etc.. ■ If the flow channel is not completely filled with the medium, it is recommended to install the sensor from underneath. ■ If deposits are likely to built up, it is recommended to install the sensor on the side. It is important to note that deposits can also form on the tip, which may affect the monitoring results. Therefore, it is recommended to clean the sensor at regular intervals and to select the associated service interval accordingly. ■ If blistering is to be expected, ensure that there is no air bubble located in the area of the tip when installing the sensor. ■ If the sensor is mounted in vertical piping systems, it is recommended to position the sensor within the riser.
Correct installation	To retrieve the full performance potential of the sensor, it must be aligned correctly. In particular when monitoring bad heat-conductive media such as oils, liquids with high solids, abrasive media, etc., when exposed to fast temperature changes (K/min) and, in general, near components with analog output. Correct installation is ensured, as soon as the effective flow direction of the application matches the direction of flow indicated by the "arrow" on the sensor.

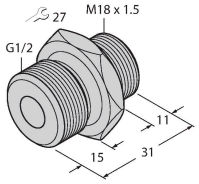
Accessories

FCA-FCST-G1/4-A4 6870290



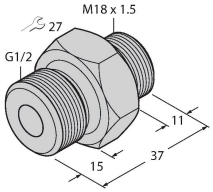
Screw-in adapter for flow sensors in the F(T)CST series for screwing into a T-piece or a welding sleeve; process connection G1/4" external thread

FCA-FCST-G1/2-A4 6870291



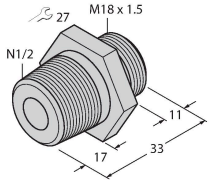
Screw-in adapter for flow sensors in the F(T)CST series for screwing into a T-piece or a welding sleeve; process connection G1/2" external thread

FCA-FCST-G1/2-A4/L037 6870292



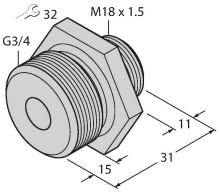
Screw-in adapter for flow sensors in the F(T)CST series for screwing into a T-piece or a welding sleeve; process connection G1/2" external thread

FCA-FCST-N1/2-A4 6870293



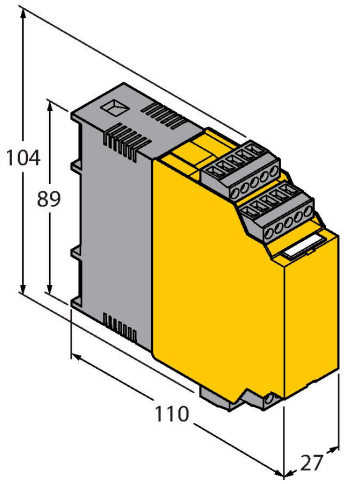
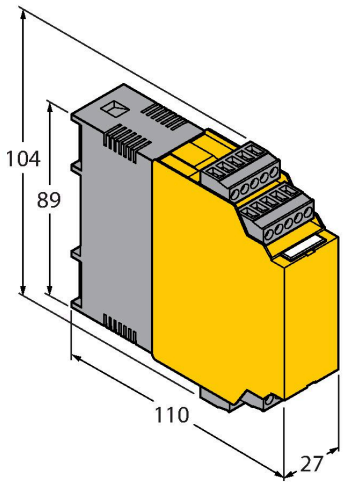
Screw-in adapter for flow sensors in the F(T)CST series for screwing into a T-piece or a welding sleeve; process connection 1/2" NPT external thread

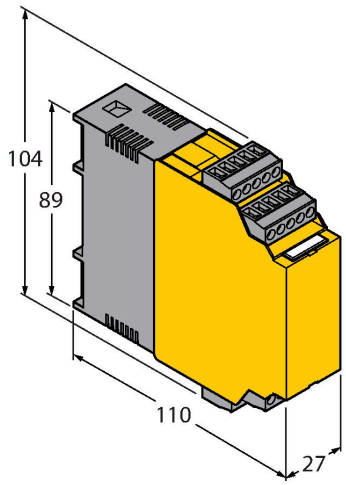
FCA-FCST-G3/4-A4	6870294



Screw-in adapter for flow sensors in the F(T)CST series for screwing into a T-piece or a welding sleeve; process connection G3/4" external thread

Accessories

Dimension drawing	Type	ID	
	FM-IM-3UP63X	7525100	Signal processor for non-Ex flow sensors from the FC….-NA… family; operating voltage 20…30 VDC; LED bar for displaying flow speed and medium temperature; IO-Link device with transistor outputs for flow, temperature and errors
	FM-IM-3UR38X	7525102	Signal processor for non-Ex flow sensors from the FC….-NA… family; operating voltage 20…250 VAC; LED bar for displaying flow speed and medium temperature; IO-Link device with transistor outputs for flow, temperature and errors

Dimension drawing	Type	ID	
	FM-IM-2UPLI63X	7525104	Signal processor for non-Ex flow sensors from the FC….-NA… family; operating voltage 20…30 VDC; LED bar for displaying flow speed and medium temperature; IO-Link device with analog output for flow and transistor outputs for temperature and errors